

**AMENDMENTS TO THE DRAWINGS**

The attached sheets of drawings include a resubmission of Figs. 1, 3, 7, 9 and 11. These sheets, which includes Figs. 1, 3, 7, 9 and 11, replaces the original sheet including Figs. 1, 3, 7, 9 and 11. Because no changes were made to the drawings, no annotated sheets are attached.

Attachment: Replacement Sheets (5)

### **REMARKS**

The Office Action of September 15, 2008 has been reviewed and the comments therein carefully considered. The application has been amended to address each of the concerns raised in the Office Action, which are discussed in more detail below.

#### **Objections to the Drawings**

Figures 1, 3, 7, 9 and 11 have been objected to because they fail to show the first and second electrodes and the membrane between the two electrodes as described in the specification. After reviewing the drawings submitted to the Office and comparing the submitted drawings with the drawings which appear on the PAIR system, Applicants believe that the clarity of the drawings, particularly with respect to the portion of the drawings which illustrate the above-mentioned elements of the system, was compromised during the submission process. Applicants resubmit herewith the drawing sheets showing Figures 1, 3, 7, 9 and 11. In the event these resubmitted drawings again fail to reach the Examiner with the requisite degree of clarity, the Examiner is invited to contact the undersigned to resolve the issue.

#### **Substitute Specification**

The Office Action has indicated that the numerous grammatical errors in the specification as filed call for Applicants to submit a substitute specification. Applicants submit herewith a substitute specification which better conforms to the English language and appropriate grammatical rules. Also included is a clean version of the substitute specification. No new matter has been added in the substitute specification.

#### **Rejection Under 35 U.S.C. 112, First Paragraph**

Claims 18-27 stand rejected under 35 U.S.C. 112, first paragraph as failing to satisfy the enablement requirement. Specifically, the Office Action states that the expression "the sensor detecting the concentration of the liquid fuel by a temperature compensated electromotive force, produced by compensating an electromotive force of the monitor cell by an output signal of the temperature detector" in each of claims 18, 26 and 27 is incorrect because the sensor does not detect the concentration of the liquid fuel by electromotive force. Instead, the position in the Office Action is that the electromotive force is adjusted by the

results of the sensor which includes a temperature detector. Consequently, the Office Action asserts, the electromotive force is adjusted by varying the concentration of the liquid fuel.

Applicants respectfully disagree with this rejection and with this characterization of the operation of the sensor. As described throughout the specification, the sensor uses data from the electromotive force (i.e. voltage) along with temperature data in order to determine the concentration of the liquid fuel at a given point in time. For instance, on page 7 of the specification, Applicants state that "a fuel concentration decline is detected from the increase in electromotive force across the first and second electrodes and the fuel concentration rise is detected from the decrease in electromotive force." Using this information, along with one or more temperature measurements, the concentration of the liquid fuel can be determined and then adjusted to the appropriate level, as shown in Figure 4. While the electromotive force may change as a result of varying the concentration of the liquid fuel, this is the typical outcome of any corrective closed-loop control system. The concentration of the liquid fuel is changed when it is not at the desired level, and whether or not the concentration is at the desired level is determined by detecting and analyzing the temperature-compensated electromotive force using the sensor. If the measured concentration is not at the desired level, the fuel concentration is changed and the measure-and-correct control loop repeats.

From Applicants' disclosure, one skilled in the art would be able to practice a fuel cell system comprising a sensor which detects the concentration of the liquid fuel using a temperature-compensated electromotive force.

#### Objection to Claim 22

Claim 22 has been objected to as being dependent on a rejected base claim. Claim 22 has now been amended to depend on pending claim 20. Thus, this objection is now moot and should be withdrawn.

#### Rejection Under 35 U.S.C. 112, Second Paragraph

Claims 18-29 stand rejected under 35 U.S.C. 112, second paragraph as being indefinite. Applicants have now reviewed the claims and made the appropriate amendments to conform claims 18-29 to the statutory requirements of the first paragraph of 35 U.S.C. 112.

With respect to claim 18, "the cell" has been removed from line 2 of the claim,

"a liquid fuel" in line 7 has been amended to read "the liquid fuel" to clarify that the liquid fuels in lines 4 and 7 are the same, and the word "respectively" has been inserted as suggested by the Examiner. Similar amendments have been made in claims 26-28. Claim 28 has further been amended to clarify that the liquid fuel permeates the membrane. No new matter has been added by these amendments.

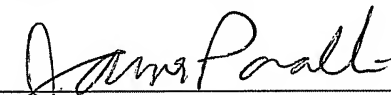
In view of the amendments to the claims, Applicants respectfully submit that the rejection under 35 U.S.C. 112, second paragraph should be reconsidered and withdrawn.

CONCLUSION

For all of the foregoing reasons, the pending claims are in condition for allowance. Accordingly, reconsideration of the outstanding rejections, examination of the claims on the merits and allowance of pending claims 18-29 are respectfully requested.

Respectfully submitted,  
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